



# Data Sheet

Research Use Only

## Compound Name

Irinotecan Hydrochloride Trihydrate

## Catalog Number

SM61

## Activity

Irinotecan hydrochloride trihydrate, Irinotecan (CPT 11), a compound within the camptothecin family, is an inhibitor of Topo I (topoisomerase I) involved in cellular DNA replication and transcription. This compound is a prodrug which needs to be transformed by carboxylesterases to its active metabolite SN-38.

## Purity

>99%

## Formula

$C_{33}H_{38}N_4O_6 \cdot HCl \cdot 3H_2O$

## Solubility

DMSO, water

## References

1. Goto, S., et al. 1996. Anticancer Res. 16(5A): 2507-2511. PMID: 8917343
2. Metz, MZ., et al. 2013. Stem Cells Transl Med. 2(12): 983-992. PMID: 24167321
3. Hong, SH., et al. 2013. Cancer Gene Ther. 20(12): 678-682. PMID: 24310061

## Alternative Names

Camptosar, Topotecin, Campto, Camptothecin 11, CPT-11, CPT 11, U-101440E, PNU-101440E, DQ-2805, (S)-4,11-diethyl-4-hydroxy-3,14-dioxo-3,4,12,14-tetrahydro-1H-pyrano[3',4':6,7]indolizino[1,2-b]quinolin-9-yl [1,4'-bipiperidine]-1'-carboxylate hydrochloride trihydrate

## Effect

As a Topo I inhibitor, Irinotecan inhibits the religation step of the enzyme's normal action, inducing single stranded DNA breaks. These single stranded breaks are then converted to double-stranded breaks within the course of DNA replication which is reported to induce apoptosis or repair mechanisms as a result. Irinotecan has a therapeutic effect in malignant brain tumors, with increased efficacy when combined in neural stem cells therapies.

## CAS

136572-09-3

## Molecular Weight

677.18

## Stability

Stable at -20°C. Keep away from direct sunlight.